



# VO-43-1

*Insulated Articulated Aerial*



## *FEATURES INCLUDED IN THE VO-43-1*

### **INSULATED UPPER BOOM**

The 8 in. x 10 in. (200 mm x 250 mm) rectangular upper boom is constructed of high strength filament-wound epoxy resin fiberglass. The fiberglass has a gel coat and a high gloss durable urethane finish for added weather protection and water beading. The fiberglass boom is certified for 46 KV and below in accordance with ANSI A92.2 Category C dielectric rating requirements. The upper boom articulates a total of 240° relative to the lower boom from -10° to +230°. A side by side boom design allows low travel height and improved platform access. The upper boom articulation is accomplished by a double acting hydraulic cylinder and 4-bar mechanical linkage. The system does not use any cables and the booms can be stowed in any sequence. A double acting holding valve is provided. An upper boom storage cradle mounted on the turret assures solid boom support in the stowed position. A ratchet-type boom tie-down strap is included.

### **LOWER BOOM**

The lower boom is designed and constructed from high strength, 12 in. (300 mm) square, steel tube. Boom articulation is 115° from horizontal to 25° past vertical. Articulation is achieved by using a double-acting hydraulic cylinder equipped with two integral holding valves.

### **ELECTRICAL INSULATION SPECIFICATIONS**

The upper boom is tested and certified as standard for electrical work at 46kV and below in accordance with ANSI A92.2 Category C dielectric rating requirements. The chassis insulating system (lower boom insert) is also tested and certified according to ANSI A92.2.

### **CYLINDERS**

Both the upper boom and lower boom cylinders are the threaded end-cap design. Both boom cylinders are equipped with two integral holding valves to prevent creep of the booms and to lock the booms in position in the event of a hydraulic failure.

### **CONTINUOUS ROTATION**

Rotation is continuous and unrestricted in either direction. The rotation system consists of a hydraulically driven worm and spur gear acting on a shear-ball rotation bearing. The critical bolts holding the lift to the rotation bearing and the rotation bearing to the pedestal are grade 8. These critical bolts are torque seal marked to provide a quick means of detecting any loosening. An eccentric ring gearbox mounting allows for precise backlash adjustments sequence.

### **MECHANICAL PLATFORM LEVELING**

Platform leveling is achieved automatically through a completely enclosed parallelogram system. The major components of this system include 1 in. (25 mm) diameter fiberglass leveling rods and No. 100 high strength roller chain. There are no cables used in this system. The fiberglass leveling rods maintain the insulation gaps in all boom positions and are 100% tested at twice the rated load. The tension is adjusted by means of a threaded rod in the upper and lower boom and platform leveling is adjusted by another threaded rod at the turret.

### **LUBRICATION**

Non-lube bearings are used at most pivot points. Only the rotation bearing and leveling chains require periodic lubrication.



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Insulated Articulating Aerial



## GENERAL SPECIFICATIONS

### VO-43-1

(Based on 40 in. (1.02m) Frame Height)

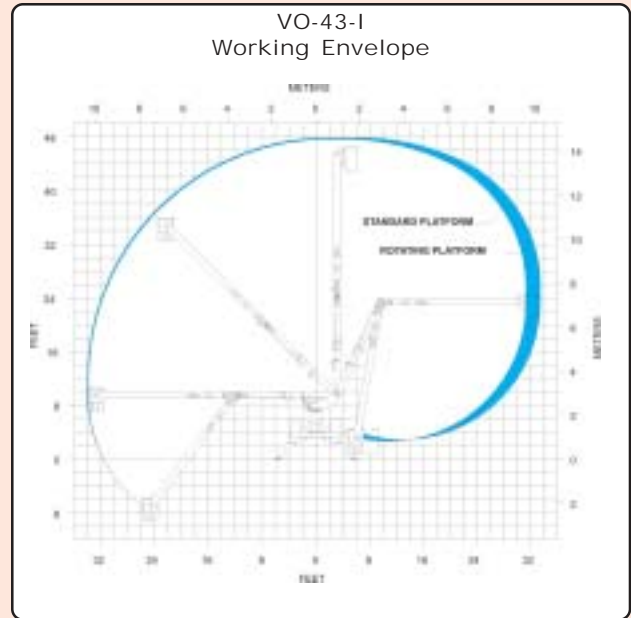
Horizontal Reach Overcenter .....	34 ft. (10.4 m)
Horizontal Reach Non-Overcenter .....	33 ft. 1 in. (10.1 m)
Standard Platform Capacity .....	350 lbs. (160 kg)
Maximum Platform Capacity .....	400 lbs. (180 kg)
Lower Boom Lift Eye Capacity .....	1,500 lbs. (680 kg)

### With Standard Pedestal

Height to Bottom of Platform .....	42 ft. 10 in. (13 m)
Working Height .....	47 ft. 10 in. (14.6 m)
Stowed Travel Height .....	10 ft. 3 in. (3.1 m)
Weight of Lift .....	3450 lbs. (1565 kg)

### Hydraulic System

Operating Pressure .....	2500 PSI (175 kg/cm <sup>2</sup> )
Flow Rate .....	6 GPM (23 lpm)
Filtration .....	10 micron return
.....	100 mesh suction
System Type .....	Open center
Power Source .....	PTO pump



NOTE: 1. Specifications may vary without prior notification.  
 2. Required GVWR can vary significantly with chassis, lift mounting location, service body, accessories, and desired payload.

## Options

- 400lbs. Platform Capacity
- Platform Liner and Cover
- Manual Platform Tilt
- 90° Platform Rotation
- Two-Speed Manual Throttle-Control
- Emergency Power
- Category B Dielectric Testing & Certification
- Outriggers or Torsion Bars
- Tool Port Pressure & Flow Control
- Second Set of Tool Power Outlets



Platform tilt allows for easy cleaning.

  
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Torsion bars provide additional chassis support.



Articulation allows for easy access to compartments.

